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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte BRIAN DAVID McFADDEN

Appeal 2017-001477
Application 14/215,034
Technology Center 2100

Before ERIC B. CHEN, JEREMY J. CURCURI, and
PHILLIP A. BENNETT, *Administrative Patent Judges*.

CHEN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134(a) from the non-final rejection of claims 20–41 and 43–47. Claims 1–19 and 42 have been cancelled. We have jurisdiction under 35 U.S.C. § 6(b). We affirm-in-part.

STATEMENT OF THE CASE

Appellant’s invention relates to regulating the information exchange between information producer and information consumer. (Abstract.)

Claims 20, 34, and 40 are exemplary, with disputed limitations in italics:

20. A method for using a computer system for determining inclusion of an information item to an information stream of an information consumer comprising:

determining for the information item a producer priority relating to the information consumer;

determining for the information consumer a consumer priority relating to the information item;

determining whether to include an information item into the information stream of the information consumer for the producer priority and the consumer priority according to a decision matrix;

a participation prediction map relating expected item value for the information consumer and predicted participation;

a distribution of information items over a range of consumer priority and producer priority;

adjusting the decision matrix, wherein an include region for the decision matrix is determined, such that:

(a) any item from the distribution of information items in the region is more preferred to an item not in the region according to an exchange value function, and

(b) a participation metric related to the number of items from the distribution of information items in the region is approximately equal to a predicted participation

from the participation prediction map for a derived expected item value.

34. A method in a computer system for assigning priority to an audience target for use with at least one information item comprising:

- obtaining multiple audience targets;
- obtaining an order for the audience targets wherein the audience targets are ranked;
- obtaining a derived audience size relating to each audience target;
- an audience size limits map relating audience size and priority;
- determining a priority for each audience target using the derived audience size for said audience target and the audience size limits map; and
- whereby the multiple audience targets are assigned a priority.

40. An information exchange system for regulating the exchange of at least one information item between an information producer and an information consumer comprising:

- a decision matrix;
- a decision matrix control loop;
- a means for determining inclusion of the information item in an information stream of the information consumer, wherein the means for determining inclusion uses the decision matrix;
- a means for predicting participation of an information exchange user;
- a means for determining a success metric, wherein said success metric is derived from predicted participation; and
- a means for controlling the information stream, wherein the means for controlling uses the decision matrix control loop to adjust the decision matrix to improve or maintain the success metric.

Claims 40 and 41 stand rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter.

Claims 20–33, 40, 43, and 47 stand rejected under 35 U.S.C. § 103 as unpatentable over Kramer (US 6,327,574 B1; Dec. 4, 2001) and American Society for Quality (Nancy R. Tague, *The Quality Toolbox* 219–223 (ASQ Quality Press 2nd ed. 2004) *reprinted as* American Society for Quality, *Decision Matrix*, <http://asq.org/learn-about-quality/decision-making-tools/overview/decision-matrix.html>).

Claims 44–46 are rejected under 35 U.S.C. § 103 as unpatentable over Kramer, American Society for Quality, and Sturman (EP 2,463,001 A2; June 13, 2012).

Claims 34–39 and 41 stand rejected under 35 U.S.C. § 103 as unpatentable over Kramer and Sturman.

ANALYSIS

§ 103 Rejection—Kramer and American Society for Quality Claims 20–33, 43, and 47

We are persuaded by Appellant’s arguments (App. Br. 13) that the combination of Kramer and American Society for Quality would not have rendered obvious independent claim 20, which includes the limitation “a distribution of information items over a range of consumer priority and producer priority.”

The Examiner found that Illumination Sorter 816 of Kramer, which includes Boolean Matching 1016 and Metric Matching 1018 to sort illuminations (i.e., a piece of targeted content), corresponds to the limitation “a distribution of information items over a range of consumer priority and

producer priority.” (Non-Final Act. 5; *see also* Ans. 17–18.) We do not agree with the Examiner’s findings.

Claim 20 recites “a *distribution* of information items over a range of consumer priority and producer priority” (emphasis added). One relevant plain meaning for “distribution” is “the position, arrangement, or frequency of occurrence (as of the members of a group) over an area or throughout a space or unit of time.” MERRIAM-WEBSTER’S COLLEGIATE DICTIONARY 338 (10th ed. 1999). Moreover, Appellant’s Specification describes the following:

In one embodiment, a distribution of information items on the two dimensional decision matrix 70 or decision grid may be computed for each consumer. *The distribution records the number of information items for a time period for each point in the decision matrix 70 or decision grid 70d.* Any number of techniques specific to the information exchange can be used for recoding the distribution based on historical data. For example using weighted history, rolling average or other computations. *Multiple distributions are possible and can be used for different purposes in computing other metrics.* In one embodiment, aggregations of distributions across consumer may be used.

(Spec. 14:21–27 (emphases added).) Thus, under the broadest reasonable interpretation consistent with the Specification, we interpret “distribution” as the position, arrangement, or frequency of occurrence over an area or throughout a space or unit of time.

Kramer relates “to the creation and maintenance of models of consumers, based upon transactional data extracted from structured information received via electronic channels and viewed by the consumer, and the use of those models to aid in presenting targeted content.” (Col. 1, ll. 15–19.) Figure 8 of Kramer illustrates system 800 for using hierarchical

consumer models for illuminating documents (col. 4, ll. 11–12), which includes database 804, attribute vector 808, Boolean Abstractor 812, and Illumination Sorter 816 (col. 21, ll. 51–61). Kramer explains that “the Illumination Sorter **816** includes a Boolean Matching **1016** and Metric Matching **1018**,” such that “[t]he Boolean Matching **1016** evaluates the Boolean query **1034** used to select all illuminations that do meet the query constraints with respect to the facts in the database **804** or abstracted data from the attribute vector **808** via the Boolean Abstractor **812**.” (Col. 23, ll. 41–46.) Kramer further explains that “[e]ach Boolean query may also be given a ‘priority,’ which is used to sort a set of illuminations that only use Boolean queries, and do not use model queries” and that “[t]hose illuminations with higher priorities will appear earlier in the sorted illumination list.” (Col. 23, ll. 54–62.)

Although the Examiner cited to Illumination Sorter 816 of Kramer, which includes a Boolean Matching 1016 and Metric Matching 1018, such that Boolean query 1034 is prioritized, the Examiner has provided insufficient evidence to support a finding that Kramer teaches “a distribution of information items over a range of consumer priority and producer priority.” In particular, although Kramer explains that illuminations can be prioritized, Kramer is silent with respect to determining position, arrangement, or frequency of occurrence over an area or throughout a space or unit of time for consumer priority and producer priority, and accordingly, Kramer cannot teach the limitation “a distribution of information items over a range of consumer priority and producer priority,” as required by claim 20.

Accordingly, we are persuaded by Appellant’s arguments that “[t]he Examiner does not provide any basis in fact and/or technical reasoning to

reasonably support the determination that show specifics of how ‘a set of illuminations’ or ‘the sorted illumination list’ in Kramer alone could be interpreted as a distribution of information items.” (App. Br. 13 (emphases omitted).)

Thus, we do not sustain the rejection of independent claim 20 under 35 U.S.C. § 103(a). Claims 21–33, 43, and 47 depend from independent claim 20. We do not sustain the rejection of claims 21–33, 43, and 47 under 35 U.S.C. § 103(a) for the same reasons discussed with respect to independent claim 20.

Claim 40

We are also persuaded by Appellant’s arguments (App. Br. 18) that the Examiner erred in concluding that the combination of Kramer and American Society for Quality would have rendered claim 40 obvious.

Claim 40 recites “a *means for* determining inclusion of the information item in an information stream of the information consumer,” “a *means for* predicting participation of an information exchange user,” “a *means for* determining a success metric,” and “a *means for* controlling the information stream” (emphases added). We interpret “means for” as a means-plus-function claim limitation. Accordingly, such language must be construed in accordance with 35 U.S.C. § 112, sixth paragraph, or 35 U.S.C. § 112(f) by “look[ing] to the specification and interpret[ing] that language in light of the corresponding structure, material, or acts described therein, and equivalents thereof, to the extent that the specification provides such disclosure.” *In re Donaldson Co., Inc.*, 16 F.3d 1189, 1193 (Fed. Cir. 1994) (en banc).

However, because the Examiner has not performed the initial step of “look[ing] to the specification and interpret[ing] that language in light of the corresponding structure, material, or acts described” (Non-Final Act. 11–12), the Examiner has erred by not meeting the initial burden of demonstrating that independent claim 40 is unpatentable under 35 U.S.C. § 103.

Accordingly, we are persuaded by Appellant’s argument that “claim 40 unambiguously recites language in the form needed to meet the requirements for interpretation under 35 U.S.C. § 112 (f)” and “[t]he Examiner has erred in the rejection of claim 40 under 35 U.S.C. §103(a) by not interpreting the claim under 35 U.S.C. § 112 (f).” (App. Br. 18.)

Thus, we do not sustain the rejection of independent claim 40 under 35 U.S.C. § 103.

§ 103 Rejection—Kramer, American Society for Quality, and Sturman

Claims 44–46 depend from independent claim 20. Sturman was cited by the Examiner for teaching the additional features of claims 44–46. (Non-Final Act. 13–14.) However, the Examiner’s application of Sturman does not cure the above noted deficiencies of Kramer and American Society for Quality.

§ 103 Rejection—Kramer and Sturman

Claims 34–39

We are not persuaded by Appellant’s arguments (App. Br. 22–26; *see also* Reply Br. 24–30) that the Examiner improperly combined Kramer and Sturman.

The Examiner found that the targeting criteria of Sturman, for example, date range or time of day targeting, and the impression counts of Sturman, collectively correspond to the limitations “obtaining a derived audience size relating to each audience target.” (Non-Final Act. 15.) The Examiner further found that the “Run Rate” for an advertising campaign, which is either ahead or behind schedule, corresponds to the limitation “determining the priority for each audience target using the derived audience size for said audience target and an audience size limits map.” (*Id.*) The Examiner concluded that “it would have been obvious . . . to combine these analogous arts and assign priority to an audience target based on the size of the audience needed to be reached in Kramer because doing so would allow for delivery of content more effectively” (*id.*) because “using the run rate [of Sturman] further allows a user of Kramer to set a limit that how many advertisements should be executed” (Ans. 41). We agree with these findings and conclusions.

As discussed previously, Kramer relates “to the creation and maintenance of models of consumers, based upon transactional data extracted from structured information received via electronic channels and viewed by the consumer, and the use of those models to aid in presenting targeted content . . . in a way that does not compromise the consumer’s privacy.” (Col. 1, ll. 15–21.) Kramer explains that “[c]onsumer profiles are developed from an analysis of the consumer’s past transactions” (col. 11, ll. 24–25) and “with the explicit permission of randomly selected consumers, consumer profiles can be fed back to the model in order to refine appeal profiles” (col. 11, ll. 34–36). Also discussed previously, Kramer explains that “[e]ach Boolean query may also be given a ‘priority,’ which is used to

sort a set of illuminations that only use Boolean queries, and do not use model queries” and that “[t]hose illuminations with higher priorities will appear earlier in the sorted illumination list.” (Col. 23, ll. 54–59.)

Sturman relates to advertisement delivery schemes, in particular, targeted advertisements for multiple video games. (Abstract.) Sturman explains that “a matching process involves taking a set of submitted advertisements/advertisement campaigns that are designated for flight in a given time period and, based on targeting criteria provided by the advertisers,” for example, date range targeting or time of day targeting. (¶ 53.) Sturman further explains that “an advertisement with a lower run rate (e.g., has only run once so far) may take precedence over an advertisement with a higher run rate (e.g., has run three times so far).” (¶ 63.) Additionally, Sturman explains that “run rate may be calculated based on percent of goal achieved divided by the time period that has passed.” (¶ 65.)

A person of ordinary skill in the art would have recognized that incorporating the run rate of Sturman with the consumer models of Kramer for illuminating documents, would improve Kramer by controlling the run rate of previously prioritized illuminations of Kramer. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007) (“[I]f a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.”). Thus, we agree with the Examiner (Non-Final Act. 15) that modifying Kramer to incorporate the run rate of Sturman would have been obvious.

Appellant argues that “[f]or the referenced prior art to be obvious the problem solved by the claim would need to have been know[n] to a person of ordinary skill.” (App. Br. 23 (emphasis omitted); *see also* Reply Br. 24–26.) In particular, Appellant argues that “neither Kramer or Sturman suggest or anticipate the problem or the solution described by the claim” because “Kramer can not anticipate or suggest the need to assign priority to an audience target using audience size, and Kramer can not anticipate or suggest using the audience size limits map to solve that need.” (App. Br. 22 (emphases omitted).) Similarly, Appellant argues that “Sturman does not suggest or anticipate the need to assign priority to an audience target using audience size, and Sturman does not suggest or anticipate a solution for assigning priority to an audience target using audience size.” (*Id.* at 23.) However, the identification of the “problem to be solved” is only one of many rationales that the Examiner can provide in order to support a conclusion of obviousness. *See KSR*, 550 U.S. at 415–421. As discussed previously, the rationale provided by the Examiner for combining Kramer and Sturman was based upon the improvement of a similar device in the same way as in the prior art.

Appellant further argues that

[a] person of ordinary skill in the art having read the description of Kramer would be deterred from combining Kramer and Sturman, as suggested by the Examiner, after realizing that Sturman’s suggestion of setting “priority” based on “RunRate” . . . would give a priority to Kramer’s “illuminations” that would vary with time and usage by other “users” or “consumer units” in Kramer.

(App. Br. 24–25 (emphases omitted); *see also* Reply Br. 29–30.) However, the Examiner’s proposed modification of Kramer with Sturman is based

upon supplementing the selected illuminations of Kramer with the run rate of Sturman, rather than the hypothetical modification argued by Appellant.

Appellant further argues that “‘consumer profiles’ are clearly different from the ‘executed advertisement instances’ needed for Sturman’s ‘impression Counted’ and ‘fed back to the model’ suggests an entirely different purpose and time frame.” (App. Br. 25 (emphases omitted).) Accordingly, Appellant argues, “the references of Kramer in view of Sturman when combined as suggested by the Examiner destroy the intent of Kramer [because] ‘no information collected, generated or inferred by TIC ever leaves the user’s control’ and any person of ordinary skill would be deterred from combining them for at least this reason.” (*Id.* (emphases omitted).) However, although Kramer generally explains that “personal information about the user only flows from external sources into the user computer” (col. 6, ll. 2–3), Kramer also provides an exception to the use of personal data such that “with the explicit permission of randomly selected consumers, consumer profiles can be fed back to the model in order to refine appeal profiles” (col. 11, ll. 34–36).

Therefore, the Examiner has properly combined Kramer and Sturman to reject independent claim 34 under 35 U.S.C. § 103(a).

Accordingly, we sustain the rejection of independent claim 34 under 35 U.S.C. § 103(a). Claims 35–39 depend from claim 34, and Appellant has not presented any additional substantive arguments with respect to these claims. Therefore, we sustain the rejection of claims 35–39 under 35 U.S.C. § 103(a), for the same reasons discussed with respect to independent claim 34.

Claim 41

We are persuaded by Appellant’s arguments (App. Br. 27) that the Examiner erred in concluding that the combination of Kramer and Sturman would have rendered independent claim 41 obvious.

Claim 41 recites “a *means for* obtaining a derived size for the audience target,” “a *means for* computing the audience size limits map,” “a *means for* determining a success metric,” and “a *means for* determining a priority for the audience target” (emphases added). Again, we interpret “means for” as a means-plus-function claim limitation. Accordingly, such language must be construed in accordance with 35 U.S.C. § 112, sixth paragraph, or 35 U.S.C. § 112(f) by “look[ing] to the specification and interpret[ing] that language in light of the corresponding structure, material, or acts described therein, and equivalents thereof, to the extent that the specification provides such disclosure.” *Donaldson*, 16 F.3d at 1193.

However, because the Examiner has not performed the initial step of “look[ing] to the specification and interpret[ing] that language in light of the corresponding structure, material, or acts described” (Non-Final Act. 17–18), the Examiner has erred by not meeting the initial burden of demonstrating that independent claim 41 is unpatentable under 35 U.S.C. § 103(a).

Accordingly, we are persuaded by Appellant’s argument that “claim 41 unambiguously recites language in the form needed to meet the requirements for interpretation under 35 U.S.C. § 112(f)” and “[t]he Examiner has erred in the rejection of claim 41 under 35 U.S.C. § 103(a) by not interpreting claim 41 under 35 U.S.C. § 112(f).” (App. Br. 27.)

Thus, we do not sustain the rejection of independent claim 41 under 35 U.S.C. § 103(a).

§ 101 Rejection

We do not sustain the rejection of independent claims 40 and 41 under 35 U.S.C. § 101 for the reasons discussed previously with respect to the rejections of claims 40 and 41 under 35 U.S.C. § 103(a), and in particular because the Examiner has failed to interpret the claims under 35 U.S.C. § 112(f).

DECISION

The Examiner's decision rejecting claims 20–33, 40, 41, and 43–47 under 35 U.S.C. § 103 is reversed.

The Examiner's decision rejecting claims 34–39 under 35 U.S.C. § 103 is affirmed.

The Examiner's decision rejecting claims 40 and 41 under 35 U.S.C. § 101 is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART